

I subjoin the dimensions of an adult male specimen of *Hylobates lar* shot near Hlyng bway, Tenasserim province; January, 1855. But I believe it attains a larger size.

Length from crown to posteriors 1' 7 $\frac{5}{8}$ "

Humerus 9 $\frac{1}{2}$ ", Radius 9 $\frac{1}{2}$ ", Hand 6", Total 2' 1".

Femur 7 $\frac{1}{2}$ ", Tibia 7 $\frac{1}{2}$ ", Foot 4 $\frac{1}{2}$ ". Total 1' 7 $\frac{1}{2}$ ".

Height when standing upright about 2' 6".

I should not omit mentioning the peculiar manner in which this species drinks, and which is by scooping up the water in its long narrow hand, and thus conveying a miserably small quantity at a time to its mouth. It is to be hoped the animal is not much troubled with thirst.

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LITERARY INTELLIGENCE.

*Extrait du mémoire de MR. HOLMBOE sur l'origine du système de poids de l'ancienne Scandinavie.\**

Pendant que le système de poids de l'ancienne Rome, constituant la livre de 12 onces était en usage dans une grande partie de l'Europe, la Scandinavie se servait d'un système tout différent, comptant 1 mörk (plûtard dit marc) = 8 asrar (plur de eyrir, plûtard dit öre).

1 eyris = 3 örtugar ou ertugar (plur. de örtug).

On est frappé de rencontrer le même système en usage dans l'Inde méridionale moderne, ou,

1 çer est = 8 palas.

1 pala = 3 tolas,

et plus frappante encore est l'égalité de la pesanteur des poids respectifs des deux contrées si éloignées l'une de l'autre. L'auteur donne deux listes de la pesanteur de l'once (eyrir, pala) dans divers états de l'Europe et de l'Inde, d'où il résulte, que sa pesanteur, quoiqu'un peu variante, se trouve presque entre les mêmes bornes ici et là, ce qui est aussi le cas avec l'once de plusieurs états Mahometans hors de l'Inde.

Il est vrai que, depuis le moyen âge, le marc de 8 onces a été en usage dans la plupart des états Européens; mais il faut remarquer, que l'on n'y s'en sert que pour peser l'or, l'argent et un nombre très limité d'autres articles précieux, pendant que la livre de 12 onces

\* Communicated in a letter to Babu Rajendra Lal Mitra.



est le poids principal pour les vivres et les marchandises. Les Scandinaves au contraire se servent du marc, eyrir et ertag pour tout objet pondérable ; et la division de l'once en 3 unités inférieures ne se rencontre nulle part hors de Scandinavie et de l'Inde.

L'auteur a fait des recherches pour trouver des traces du système des Scandinaves dans les contrées, qu'ils passaient lors de leur émigration de l'Asie, et par lesquelles un chemin de commerce très fréquenté entretenait les relations entre l'Orient et le Nord jusqu'à l'invasion des Tartares. Le résultat de ces recherches se borne à attirer l'attention sur un grand nombre de lingots d'argent, qu'il y a une trentaine d'années ont été desenterrés à Riazan, presqu' au centre de la Russie. Or le poids moyen de ces lingots repond de très près au poids du marc ancien des Scandinaves. Et à Bokhara on se sert aujourd'hui d'une once, dit Tolendak, dont le poids est presque égal à l'ancien eyrir.

Quant à l'origine de l'égalité des poids du Nord et de l'Inde, l'auteur émet l'hypothèse, que le système a été établi chez les ancêtres communs des Ariens de l'Inde et des peuples du Nord. Pour supporter cet hypothèse il cite un certain nombre d'articles de civilisation, qui portent les mêmes ou presque les mêmes noms en Scandinavie et en Inde,—articles qui démontrent un degré de civilisation, qui doit nécessairement avoir eu besoin d'un système de poids. Les émigrés doivent donc l'avoir apporté avec eux, les uns vers le Nord, les autres vers le Sud.

*Translation.*

*Extract from the Memoir of M. Holmboe on the origin of the System of Weights in Ancient Scandinavia.*

While the system of weights of ancient Rome, comprising the pound of twelve ounces was in use in a large part of Europe, Scandinavia used a very different system, consisting of

1 mörk (afterwards marc) = 8 asrar (plural of eyrir, afterwards called öre),

1 eyrir = 3 örtugar or ertugar (plural of örtug).

One is struck at meeting with the same system in use in modern Southern India where

1 sir = 8 palas,

1 pala = 3 tolaks,



and still more striking is the equality of the respective weights, in two countries so far distant from each other. The author gives two lists of the weight of the ounce (eyrir, pala) in the different states of Europe and India, from which it appears, that although its weight varies somewhat, the variation has almost the same limits in both quarters, which is also true of the ounce in several Mahometan states external to India.

It is true that the marc of 8 ounces has been in use in most European states since the middle ages: but it must be remarked that it is only employed there for the weighing of gold, silver, and a very limited number of other precious articles, while the pound of 12 ounces is the chief weight for provisions and merchandise. The Scandinavians on the contrary use the marc, eyrir and ertag, for every weighable object; and the subdivision of the ounce into 3 units of lower value, is met with nowhere but in Scandinavia and India.

The author has sought for traces of the Scandinavian system in the countries which that people traversed in their emigration from Asia, and through which passed a well-frequented commercial route, by which Eastern and Northern nations communicated, up to the time of the Tartar invasion. The result of these researches is limited to drawing attention to a great number of ingots of silver which were dug up at Riazan, almost in the centre of Russia; the weight of these ingots corresponds very closely to that of the ancient marc of the Scandinavians: and at Bokhara, according to Tollendak, an ounce is still in use, the weight of which is almost equal to that of the ancient eyrir.

As to the origin of this equality in the weights of the North and of India, the author suggests that the system was established by the common ancestors of the Arians of India and of the Northerners. In support of this view, he cites a certain number of articles of civilization which bear the same names in Scandinavia and India,—and which indicate a degree of civilization which must have absolutely required a system of weights. The emigrants then carried this with them; some to the North, the others to the South.

H. F. B.



*Dr. E. BUHLER on Çakatâyana's Sanskrit Grammar.*

I lately received through the kindness of my friend Mr. W. Stokes of Madras, part of a transcript of MS. 1071 (Alph. Cat. E. T. H. Col.) as well as the beginning and end of MSS. 1072 and 1073, which in the *Catalogue raisonné* as well as in the Cat. Alph. are stated to contain the ancient grammar of Çakatâyana, the predecessor of Yâska, Pânini and the author of the Mahâbhâshya.

On examination, MS. 1071 proves to contain a copy of the Çabdânucâsana of Çakatâyana with the Chintâmani Vritti of Yaxavarman (beginning on fol. 31 of the original MSS., p. 149 of my transcript). The first thirty-one folios contain a compendium based on the same work, in the style of the Siddhântakaumuḍi. Its author and title I am unable to ascertain, as it is full of breaks in the beginning and in the end. MS. 1072 contains a work called Prakriyâsamgraha by Abhayacandra-siddhânta-sûri, likewise giving sûtras from the Çabdânucâsana, but if it is commentary or an abridgment of the original I cannot say. MS. 1073 resembles closely MS. 1072; its title and author are not named.

Though I only possess about  $1\frac{1}{4}$  pâda of the first adhyâya of the Çabdânucâsana I venture to give a notice of the work without waiting for the completion of the transcript, as I think it can be proved satisfactorily, that that work really belongs to the predecessor of Pânini. Besides, the above-mentioned compendium allows me to form a general idea of the whole work.

In order to prove the correctness of the title given, I give the text of the introductory verses of the Chintâmani :

Vîtarâgâya namah.

Çriyam kriyâdvah sarvajñânajyotira naçvarim.

Viçvam prakâçay-accintâmaniçcintârthasâdhanah. (1)

Namastama(h) prabhâvâbhibhûtabhûdyotahetave.

Lokopakârîne çabdabrahmane dvâdaçâtmane. (2)

Svasti çrisakalajñânasâmrajya, padamâptavân.

Mahâçramaṇa-samghâdhipatir-yah çakatâyanaḥ. (3)

Eka ççabdâmbudhimbuddhimanthareṇa pramathya yah.

Sayaçah çvi samuddadhre viçvam vyâkaranâmṛitam. (4)

Svalpagrantham sukhopâyam sampûrnam yadupakramam.



Çabdânuçâsanam sârvam arharcehâ sanvatparam. (5).

Eshtîrneshtâ na vaktavyam vaktavyam sûtratah prîthak.

Samkhyâtam nopasamkhyânâmyasya çabdânuçâsane. (6)

Tasyâtimahatîm vṛittim samhṛityeyam laghîyasî.

Sampûrṇalaxaṇâvṛittirvaxyate yaxavarmanâ. (7)

Grantha-vistara-bhîrûṇâm sukumâradhiyâmayam.

Çuçrûshâdiguṇân kartum çâstre samharanodyamah. (8)

Çabdânuçâsanasyâ nvarthâyâç cintâmane ridam.

Vṛitter granthe pramânâmtu shatsahasram nirûpitam (9)

Indracandrâdibhiççâbdair yaduktam çabdalaxaṇam

Tadihâstisamastam ca yannehâsti na tatkvacit. (10)

Ganadhâtupâthayor ganadhâtu lingânuçâsane lingagam.

Unâdikâ nunâdau çesham niççeshamatra vṛittau vidyât. (11)

Bâlâbalâjanopyasyâ vṛitter abhyâsavṛittitah.

Samastamvânṅmayam veti varshenaikena niçcayât. (12)

With these statements we must compare the end of the first chapter, which runs as follows :

Iti çabdânuçâsane cintâmanivṛittau prathamasyâdhyâyasya prathamah pâdah.

Though there can be no doubt that the MS. contains the work of Çâkatâyana, still it remains to be proved that this Çâkatâyana is the predecessor of Pânini. For the name Çâkatâyana is a *nomen gentile* and does not originally designate one individual only. Besides we know from the commentaries on the Dhatupâtha that there were two grammarians of this name.

Fortunately it is not difficult to decide this question, as Pânini quotes in three passages opinions of Çâkatâyana,—pûjârtham as the commentators say. Two of these rules are found in the fragment of the Çabdânuçâsana, which I have before me, the third is wanting because it refers to a matter treated of in one of the later books. The rules referred to are the following :

Pânini teaches viii. 4. 46.

Aco rahâbhyâm dve (scil. yare vâ).

Consonants with the exception of *h* (and of course also of *r*) standing after an *r*, or *h*, which is preceded by a vowel or diphthong, can, optionally, be doubled.

And viii. 4. 47.

Anaci ca.



(This doubling may also take place) if consonants except *h* and *r*, which are preceded by a vowel or diphthong, are followed by any letter except vowels, diphthongs *h* or *r*, (or if they stand at the end of a word).

In the following Sûtras he gives exceptions to these rules and says S. 50.

Triprabhritishu çâkaṭa'yanasya (na syât).

If three or more consonants follow each other (which otherwise fulfil the conditions stated above) the doubling shall not take place according to the opinion of Çâkaṭâyana, e. g.

Çâkaṭâyana allows only the pronunciation *indra*, not *inndra*.

In the Çabdânuçâsana we find the following corresponding rules :

I. 1, 117.

Acohrohracah, (dve vâ syâtâm) Cintâmaṇi : Acah paro yo hakâro rephaçca tâbhyâm parasya ahracah, hakârâdrephâdacaçcânyasya varnasya sthâne dve rûpe bhavato vâ, brahmmâ brahmâ, sarvvah sarvah, dirgghah dirghah, ahraca iti kim, barhit, dahrah aham.

Translation of the Sûtra :

Consonants except 'h' or 'r' following an 'h' or 'r,' which is preceded by a vowel or diphthong, may optionally be doubled.

Sûtra I. 1. 118.

Adîrghât.

Cintâmaṇi :

Adîrghâdacadah parasyâ hracah-sthâne dve rûpe bhavato vâ, daddhyatra dadhyatra, patthyodanam pathyodanam, tvakk tvak, tvagg tvag, go-nu-ttrâtah go-nu-trâtah, anvityadhikârât (from Sûtra 115 çaronu dve) kutvâdau kutve dvitvam, adîrghâdeka halîtyanuktvâ na samyage (Sûtra 119) tvacîti (Sûtra, 101) yogadvayârambhât, virâme pyayamâdeçah ahraca iti kim sahyam, (?) varyyah, ayyah titau, adîrghâditi kim, sûtram, pâtram, vâk.

Translation of the Sûtra :

Consonants except *h* and *r* preceded by a short vowel and followed by any letters (except those specified in the following rules) or *Virâma*, may optionally be doubled.

Sûtra I. 1. 119.

Na samyage.\*

Cintâmaṇi.

\* MS. na samyago.



Halonantarâh samyagah, samyage pare ahracah sthâne dve rûpe na bhavatah, indrah, (krîtsnam.)

Translation of the Sûtra :

If consonants except *h* and *r* are followed by a group of consonants, the doubling does not take place.

The last Sûtra apparently contains the opinion ascribed to Çâkatâyana by Pânini in his rule VIII. 4. 50. At the same time it must be observed that Pânini says in VIII. 4. 52.

Adîrghâdâcâryânâm,—All the Açâryas forbid the doubling of a letter preceded by a long vowel, and that Çâkatâyana who must be regarded as one of the Achâryas teaches the same thing in the Sûtra 118 just quoted.

The second passage occurs Pân. VIII. 3. 18. After having taught VIII. 3. 17. that the Visarga must be changed to *y* after a penultimate 'a,' 'â' and 'o' in the words aghah, bhoh, bhagah he (VIII. 3. 18.) continues.

Vyor laghuprayatnatarah Çâkatâyanasya and *v* and *y* (following *a*, *â* or *o* in the three words mentioned) are to be pronounced with less effort (movement of the tongue) than usually—according to the opinion of Çâkatâyana.

Çâkatâyana's sûtra, I. 1, 154, contains precisely the same rule.

He teaches I. 1. 153.

Vyoshyâ gho bho bhagoh, (scil. gluk).

Cintâmani.

Avarnâdagho bho bhago etyetebhyaçca parasya padântasya vakâ-rasya yakârasya câshipare gluk bhavati (gluk supplied from sûtra 152), vrixâ hasati (?) vrixavriçcamâ caxanovriçca (?); devâ yânti; agho hasati, bho dadâti, bhago dehi; padânta iti kim, gavyam, jayyam, bhavyam.

Translation.

A final 'v' and 'y' following a short or long 'a,' or the words aghoh, bhoh, bhagoh, must be elided before soft sounds (vowels, diphthongs and soft consonants).

Sûtra I. 1. 154.

Acyaspashtâçca, (glug).

Cintâmani.

Avarnâd-aghoh-bhoh-bhagobhyaçca paryoh padântantayorvyoraci pare glugaspashtâh avyaktâçruticçâsanno bhavati, paçau paçav'\*u, tau tay'\*u,



agho u aghoy'\*u, agho atra aghoy'atra, bho atra bhoy'atra, bhago atra bhagoy'atra, gluci gita iti sandhipratishedhah.

*Note.*—In the cases marked by \* the MS. has *y* and *v* instead of *y'*, *v'*.

Translation.

And if *v* and *y* (in this position) are followed by a vowel or diphthong, then the elision is not clearly audible; (i. e. the pronunciation of the *v* and *y* is unarticulated and the letters are hardly audible).

I add the explanation of the word *aspashtah* given in the above-mentioned compendium. There we read:

...aspashtah aspashtaçrutih praçithila sthânakaranaparispandaçca âsanah vakâro yakâraçca.....

Again it must be observed that Pânini says VIII. 3. 22. hali sarveshâm—*All* the (old) grammarians prescribe the loss of such a *v* and *y*, if it is followed by consonants; and this rule is certainly contained in Çâkatâyana's Sûtra, I. 1, 153.

After this, I think, there can be hardly any doubt that the author of the Çabdânuçâsana was the predecessor of Pânini.

But, in order to make doubly sure, I will adduce another proof for this relation, which seems to me to be still more conclusive.

Pânini teaches V. 2. 124: *vâco gminih*.

The word *vâc* takes the affix *gmini* (in the meaning of *matu*).

The Calcutta Pandits who prepared the first edition of Pânini understood the Sûtra so, that the real form of the affix was *gmin*, and consequently formed the monster *vâggmin* (with double *g*). They even misled Dr. Boethlingk (see his note to the Sûtra). Benfey\* and Aufrecht† understood the Sûtra rightly and formed *vâgmin*. The latter form alone occurs in literature, and is the only correct one. The obscurity of the Sûtra is caused by Pânini's negligence. He has omitted to state that the letter 'g' is prefixed to *min* only in order to indicate that the final of *vâc* does not become nasal, as it ought, according to the Sandhi rules. He has taken the Sûtra, with a slight alteration, from Çâkatâyana's grammar, where according to the Compendium, it is read thus: *vâco gmin*.

It is perfectly intelligible in Çâkatâyana's system, as there a prefixed 'g' constantly means "no Sandhi." The author of the Compendium says in commenting on the Sûtra:

\* Vollst. Sankt. gr. aff. min.

† Unâdisûtras glossary s. v. *vâgmin*.



Gakâro-nunâsikanivṛittyarthah.

The letter 'g' is put in order to forbid the nasal.

On other occasions Çâk. forms gluk (g + luk) in order to indicate an elision which causes hiatus, e. g. in devâ âyânti for devâh âyânti. (See the above Sûtra I. 1. 153 and the Cintâmani thereon). Here we have a clear instance, where a Sûtra of Pânini presupposes the existence of the system of Çâkatâyana.

For an abstract of the contents of the first and second half-pâda of the first Adhyâya I must refer to the Journ. B. B. R. A. S. Here I must content myself with saying that they contain Samg'nâ, Paribhâshâ, Sandhi rules, and the beginning of the declension.

From a comparison of these rules with the corresponding ones of Pânini as well as other parts occurring in the Compendium, it can be clearly established that Pânini's grammar is a very much *amplified and corrected edition* of Çâkatâyana's, and by no means what we should call an independent and original work.

A great many technical terms and names of affixes and roots he has directly borrowed from his predecessor: e. g.

1. Technical terms.

Yuvan, vridha (which Pânini uses *sometimes* for gotra, upasarga, avyaya, taddhita, kṛit, dîrgha, pluta, hrasva, nap, sup, dhâtu, pratyaya, ghi, ghu, etc.

2. Affixes.

Vatú, ðati, çnâ, çap, çî, ñgî, ðac, evi, jhi, çatri.

3. Roots.

Kriñ. The commentaries give the roots, as far as I have observed, *always* in the same forms as Pânini. The part of the text before contains no other roots than kriñ. As Çâkatâyana's Dhâtupâtha is in existence, I hope to be able hereafter to give further details on the subject.

4. The Gaṇas resemble very closely those of Pânini. In the Compendium I find the Gaṇa svarâdi at full length, and it is nearly the same as that given by the Calcutta Paṇḍits in their edition of Pânini, except that it comprises also the gaṇa prâdi. Besides I find the gaṇas ūryâdi and sâxâdâdi mentioned in Çâkatâyana's grammar. The Gaṇa pâtha belonging to Çâkatâyana's Çabdânuçâsana is said to be in existence.

Besides many entire Sûtras have been borrowed by Pânini from his



predecessor, e. g. Tirontardhau I. 4. 71. unádayo bahulam, III. 3. 1. nirvánováte, VIII. 2. 50. etc.

One of the questions, connected with this book, which will perhaps excite the greatest interest is, whether Çâkatáyana really was a Jaina or Bauddha, as we are led to think on account of his title mahâçramanasamghádhpati "moderator of the convention of the great Çramanas." The word samgha—"convention"—shows, that he belonged either to the Bauddhas or Jainas, and his commentators, who are all Jainas, of course desire to show that he was of the latter persuasion.

I cannot venture to express at present any definite opinion on the subject. But I believe that Çâkatáyana was *not* a Brahman, and should not be at all astonished, if it were established by additional evidence, which I hope will soon come into my hands, that he was a follower of Çákyamuni.

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*Extract from a letter from L. BOWRING, Esq., dated Bangalore, 22nd March, 1864.*

I may take this opportunity of mentioning that the Malnád or hill portion of Mysore through which I have recently marched, possesses a great number of inscriptions, some of the Anagerudi dynasty, others of the Kaçamba Rajas, and others again of the Skêri House who ruled these wild tracts up to the time of Hyder Ali. The inscriptions are, with very few exceptions, in what is called Hale Kannada or old Canarese, and are read with difficulty. They are invariably on large slabs placed upright in the ground, and generally with no protection from the weather. A great many of these inscriptions were copied and sent to Bengal by Dr. Buchanan, who visited Mysore under orders from Government in the beginning of the century and wrote a very interesting account of his tour, in three volumes. Mr. Walter Elliot also, of the Madras C. S., collected a great number of these inscriptions, but I do not know whether the results of his labours were communicated to the Society at Calcutta. I purpose some day, if I can secure the services of a qualified copyist, to have all that can be found in the country copied systematically.

The most interesting traces of ancient time that I have seen in the Malnád are those of the Jain sectarians. Formerly there was a noted dynasty of Jain Rajas, called the Belál Rai Rajas, who ruled both above



and below the ghâts, their head-quarters being at Halebid where there is a splendidly carved temple. It is fifteen miles from Hassan. These Jain Rajas fell before the followers of Shankar Acharya and the Vaisnavas about 800 years ago, the last Jain Raja having deserted his faith and become a believer in Vishnu, taking the name of Vishnu Vardhana. The head of the Smártas, the Sringagiri Swami, is now supreme in the Malnád country. However, Jains are still found in great numbers, and, in the remoter parts, the Heggades or Potails are generally of that faith, so that it is not unusual to find in a village a Jain Bastí, as the covered-in temples are called, with a large standing image of one of the twenty-four personifications. The present principal seat of the Jain religion is Srávana Belgul, about fifty miles north of Mysore, where there is a colossal statue of Gomateshwar hewn out of the summit of a hill, and looking northwards over the country. It is about forty-five feet high, and, though too broad in the shoulder and arms, is a fine figure. The legs are dwarfed, owing I presume to the figure having been undertaken on so gigantic a scale, that great expense would have been entailed by carving the lower extremities down to their full length. In the "Bastí," in the centre of which this image stands, there are seventy-two figures about three feet high, all of black stone, representing the different attributes of the divinity, each on its own váhana or vehicle. I incline to think that if the history of the Jains in the western part of Mysore were methodically taken up and investigated, it would be an interesting subject of research. There are few literate men in the hills; and the Brahmins are very ignorant regarding all inscriptions, as an instance of which I may mention, that when at Kalas, near the sources of the Tungabhadra river, I enquired whether there were in the Devasthan there any incised slabs, and was answered in the negative; but on visiting it in the evening, I found twenty-six stone Shásanas in Canarese (one of Saliváhan 1132), one in Devanágari and two on copper plates. This part of the country is, however, very wild, and, so far as I could ascertain, no European had been to Gangámul (the sources of the Tungabhadra) for twenty years before my visit. There is a proverb that the Kalas Mágani (Taluk) is a country of 3000 pagodas, 6000 hills, and 12,000 devils. The scenery in it is very fine.

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